

Appl. No. : **10/061,438**
Filed : **January 31, 2002**

AMENDMENTS TO THE CLAIMS

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
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27. (Cancelled)
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29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (New) A method for quantitating a glycated protein in a sample, wherein the sample contains both glycated and nonglycated forms of the protein, comprising:

providing a solid support having negatively charged groups thereon that are capable of binding both the glycated and the nonglycated forms of the protein at a first pH, and also having hydroxyboryl groups thereon, interspersed with the negatively charged groups, that are capable of binding the glycated form of the protein at a second pH;

binding both the glycated protein and the nonglycated protein to the negatively charged groups on the solid support at the first pH and then performing a first measurement indicative of the amount of glycated and nonglycated forms of the protein bound to the solid support;

changing the pH on the support to the second pH to remove both the nonglycated protein and the glycated protein from the negatively charged groups, whereupon the glycated protein immediately binds to the hydroxyboryl groups on the solid support without an incubation period, and then performing a second measurement indicative of the amount of the glycated protein bound to the solid support; and

determining the amount or ratio of glycated protein in the sample from the first and second measurements.

36. (New) The method of Claim 35, wherein the first pH is achieved by applying a buffer of about pH 5.0 to 7.0.

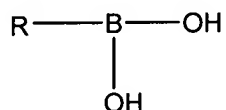
37. (New) The method of Claim 35, wherein the second pH is achieved by applying a buffer of about pH 8.0 to 10.0.

38. (New) The method of Claim 35, wherein the glycated protein is hemoglobin.

39. (New) The method of Claim 35, wherein the glycated protein is albumin.

40. (New) The method of Claim 35, wherein the sample comprises blood.

41. (New) The method of Claim 35, wherein the sample comprises serum.
42. (New) The method of Claim 35, wherein the sample comprises plasma.
43. (New) The method of Claim 35, wherein the first and second measurements measure a physical property of the protein.
44. (New) The method of Claim 35, wherein the first and second measurements are optical readings at a predetermined wavelength.
45. (New) The method of Claim 35, wherein the first and second measurements measure a protein label.
46. (New) The method of Claim 35, wherein the dihydroxyboryl group is of the type



- where R is phenyl, phenyl, alkyl of 1-6 carbons, ethyl, 1-propyl, 3-methyl-1-butyl or aminophenyl.
47. (New) The method of Claim 35, wherein the negatively charged group is selected from the group carboxylate, sulfate, sulfonate, sulfinde and phosphate.
48. (New) The method of Claim 35, wherein the solid support matrix is selected from the group of cellulose, nitrocellulose, cellulose acetate, polyacrylamide, agarose polyacrylamide copolymer, agarose, starch, nylon, nylon polyesters, dextran, cross-linked dextran, dextran acrylamide copolymer, cross-linked hydroxyethylmethacrylate, substituted cross-linked polystyrenes, polyvinylalcohol, wool, metal oxides, porous ceramics coated with hydrophilic organic polymers and glass.